

Appln. No. Serial No. 10/815,493  
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### REMARKS

Claim 4 is pending in this application. The Examiner rejected Claim 4 under 35 U.S.C. 112, second paragraph, and under 35 U.S.C. §103(a). The specification has been amended to correct a typographical error and Claim 4 has been amended in the foregoing amendment. No fees are believed due; however, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account 11-0855.

### Claim 4 Is Definite

The Examiner rejected Claim 4 as indefinite. In particular, the Examiner alleged that it is unclear as to how the step of "cutting the metal base into a plurality of segments" can be done, after the metal base has been integrated with the carbon base and coated with the mold resin. Applicant has amended Claim 4 to clarify the claimed method and in particular to clarify that the cutting process is done by forming slits on the metal base and the carbon base coated with the mold resin.

### Claim 4 is Patentable Over the Cited References

The Examiner rejected Claim 4 under 35 U.S.C. §103(a) as being unpatentable over JP10-4653 ("*Sugiyama*") in view of U.S. Patent No. 6,657,355 to *Kiyose et al.* ("*Kiyose*"). Applicant traverses this rejection for the reasons discussed below.

The method of producing a plane carbon commutator of amended Claim 4 requires forming cut-rising pieces projecting inwardly from peripheral edges of engaging holes formed in a metal base and then inserting the engaging projections into the engaging holes. In this manner, "the peripheral faces of the engaging projections 17P receive trimming effect and generate scuff mark, and the peripheral faces of the engaging projections 17P are formed into coarse faces." See page 5, lines 25-32 of the specification.

*Sugiyama* describes a method of producing a plane carbon commutator in which the engaging projections 17P are inserted into the engaging holes 15H, as shown in Fig. 7(A). After the engaging projections are inserted, then the cut-rising pieces 21 are formed using the

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tool 19, as shown in Fig. 7(B) (paragraph [0022]). *Sugiyama* fails to describe the claimed invention because *Sugiyama* describes forming the cut-rising pieces after the engaging projections are inserted into the engaging holes, whereas the claimed invention requires that the cut-rising pieces are formed before the engaging projections are inserted into the engaging holes.

The Examiner argued that *Sugiyama* teaches the metal base having cut-rising pieces 9 being formed prior to engaging the carbon base 17. However, the anchor claws 9 of *Sugiyama* are formed at the periphery of the metal base 15. The anchor claws are not formed at the periphery of the engaging holes 15H. Thus, the anchor claws 9 are not cut-rising pieces projecting inwardly from peripheral edges of engaging holes, as required by Claim 4.

The Examiner alleged that *Kiyose* discloses forming cut-rising pieces prior to the engaging of the carbon projections into the engaging hole. The cited sections of *Kiyose* describe a tapered engagement sleeve. In one embodiment, the engagement sleeve includes slits (Fig. 2) and in another embodiment the engagement sleeve does not (Fig. 1). However, neither embodiment cited by the Examiner includes cut-rising pieces, as required by Claim 4. Thus, *Kiyose* cannot describe inserting projections into engaging holes after forming cut-rising pieces, as alleged by the Examiner.

The Examiner argued that it would have been obvious to combine *Sugiyama* and *Kiyose* to "facilitate the fabrication process including through hole fitted by elastic binding force, etc." *Sugiyama* describes using cut-rising pieces so that the engaging portions remain engaged with the engaging holes. In contrast, *Kiyose* describes force-fitting the projections into the sleeves (first embodiment) or inserting the projections into sleeves that elastically expand (second embodiment). The references teach away from one another since the references describe inconsistent ways of holding the components of the communicator together.

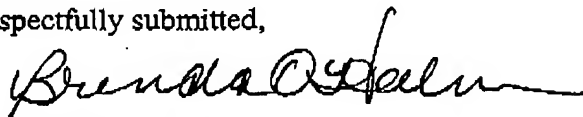
Thus, neither *Sugiyama* nor *Kiyose*, either alone or in combination, describes the method of Claim 4. Accordingly, amended Claim 4 should be patentable over *Sugiyama* and *Kiyose*.

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**CONCLUSION**

The foregoing is submitted as a complete response to the Office Action identified above. This application should now be in condition for allowance, and the Applicants solicit a notice to that effect. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799.

Respectfully submitted,



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